

PART A – COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2002 Costa-Machado Water Act of 2000
CALFED Watershed Program

Application No. 104

PROJECT TITLE: Inventory, Eradication and Monitoring of Invasive Species
(*Arundo donax* and *Tamarix spp.*)

Project Region Central Valley Indicate RWQCB #: 5
Multi-regional Project _____ Indicate RWQCB #s: _____
Statewide Project _____

PROJECT DIRECTOR (one name only) (Ms., Mr., Dr.): Robert L.A. Lossius, Assistant Public Works Director
PRINT _____ DATE _____

LEAD APPLICANT OR ORGANIZATION: Lake County Flood Control and Water Conservation District

TYPE OF AGENCY:
Municipality _____ Local Agency _____ *Nonprofit (non-landowner) _____
Nonprofit (landowner) _____ Local Public Agency X

STREET ADDRESS: 255 North Forbes Street, Room 309
CITY: Lakeport Zip 95453
P.O. BOX: _____ Code: _____
COUNTY Lake Zip _____
STATE: CA Code: _____

PHONE NO.: (707) 263-2341 FAX NO.: (707) 263-7748

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APPLICATION # 104

ADDRESS: _____ TAX ID.
NO.: _____

PROJECT TYPE: Restore and Improve aquatic habitat, GIS for data management, develop components of local watershed management plans

LEGISLATIVE
INFORMATION
Senate District 2 Assembly District 1
United States Congressional District 1

CALFED, RWQCB, or SWRCB STAFF CONTACTED REGARDING THIS PROPOSAL:

Contact:	<u>Lori Webber</u>	Contact:	<u>Dennis Bowker</u>
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Dates contacted:	<u>5/24/02</u>	Dates contacted:	<u>5/24/02 6/4/02</u>

PRIMARY COOPERATING ENTITIES:

Entity Name:	<u>West Lake Resource Conservation District</u>		
Role/Contribution to Project:	<u>Project Partner</u>		
Contact Person:	<u>Greg Dills</u>	Phone No.:	<u>(707) 263-4180</u>
E-mail address:	<u>wercd@jps.net</u>		

Entity Name:	<u>Team Arundo delNorte</u>		
Role/Contribution to Project:	<u>Cooperation/Coordination /Information</u>		
Contact Person:	<u>Mark Newhouser</u>	Phone No.:	<u>(707)996-9744</u>
E-mail address:	<u>mnewhouser@vom.com</u>		

WATERBODY/WATERSHED
(Include Catalog Number in
Section 18 of the ARD): Upper Cache (18020116)
Upper Putah (18020117)

GPS COORDINATES FOR
PROJECT LOCATION, IF
AVAILABLE: West Bounding Coordinate: -123.101810
East Bounding Coordinate: -122.338529
North Bounding Coordinate: 39.583702
South Bounding Coordinate: 38.667442

FISCAL SUMMARY:

Proposition 13 Funds Requested	<u>\$181,262</u>
Other Project Funds	<u>\$8,552</u>
Total Project Budget	<u>\$189,814</u>

CERTIFICATION

Please read before signing.

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statements may result in the disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

Applicant Signature

Date

Printed Name of Applicant

PART B – PROJECT NARRATIVE (B & C not to exceed 15 pages)

The purpose of this proposal is to inventory, eradicate, monitor eradication efforts and educate the public on two invasive riparian species of concern, primarily *Arundo donax* and *Tamarix spp.*. The primary objective is eradication of *Arundo donax*. *Tamarix spp.*, which occurs in the same environmental setting as *Arundo*, will be inventoried for future eradication efforts. The anticipated outcome is control of riparian invasive species, restoration of riparian habitat and increased public awareness about invasive species and how they impact riparian function.

Arundo donax

Arundo donax is a perennial grass forming large clumps 3-10 meters tall which has been widely introduced into primarily riparian zones and wetlands in subtropical and temperate areas of the world. Once established, it forms dense, homogenous stands at the expense of native plant species, altering the habitat of the local wildlife. No sexual reproduction is known outside its indigenous distribution. Asexual reproduction through lateral extension of rhizomes, and flow dislodgment of rhizomes and transport to deposition sites downstream are the primary mode of reproduction. Rhizomes tolerate salt water, and can desiccate for several months and then form roots in moist substrate. Established plants may expand by rhizome extension roughly one-half meter per year. *Arundo* tolerates a wide range of soil types, including infertile streambanks, but responds dramatically to nutrient enrichment.

Once established *Arundo donax* displaces native riparian vegetation and provides poor habitat for terrestrial insects and wildlife, traps sediments and narrows flood channels, leading to erosion and overbank flooding, promotes wildfire and debris blockages and damages bridges. *Arundo donax* may reduce water availability through high evapotranspiration.

Tamarix spp

Tamarix spp. is native from southeastern Europe to central Asia. *Tamarix* was introduced in the early 1800's as an ornamental and as a windbreak. It has since infested nearly every drainage system in the southwestern United States (Brotherson & Field 113) including tens of thousands of acres of riparian habitat in California. *Tamarix* develops a very dense root system that can reach depths of up to 30 feet. Consequently, *Tamarix* lowers the needed water table. Once this happens, native vegetation cannot reach needed water supplies and therefore die. In addition to lowering the water table, *Tamarix* changes the salt chemistry within the soil. When native vegetation attempts to grow, it cannot cope with processing the excess salt and dies, leaving prime soil for *Tamarix* to colonize.

These two species have been nominated as among 100 of the "World's Worst" invaders (Global Invasive Species Database - www.issg.org). In recognition of the widespread distribution and invasive nature of *Arundo donax* the implementation of actions to

prevent, control and reduce impacts of this non-native invasive species and other species is a strategic goal of the CALFED Bay-Delta Program.

Current Eradication Efforts

The Lake County Flood Control and Water Conservation District (District) has within the past three years taken an active role in trying to eradicate *Arundo donax* within riparian corridors under its jurisdiction. The current approach has been to coordinate the control of *Arundo donax* with other vegetation management operations on an as encountered basis. This method of control has proven to be ineffective for many reasons.

The District's first year effort's were centered around maps with approximate locations of *Arundo donax* inventoried in the field by stream restoration crews working on various flood control projects. The amount of monies dedicated to the control of *Arundo donax* in these locations was that amount that could be taken out of the appropriate flood zone budgets after all other flood control zone maintenance activities were completed. As it turned out, there was more *Arundo* than what was depicted on the map and there was not enough money to treat all areas. The next years *Arundo donax* eradication budget was predicated by the previous year's expenses and available funds within the flood zone budgets. When it came time to work on new sites, not enough was budgeted and/or could not be eradicated because adequate funding was not available.

In response to the amount of funding required to successfully work on eradicating *Arundo* the District started looking into other means of support. The Lake/Sonoma/Mendocino Weed Management Area was looked into as a potential funding source of *Arundo* eradication efforts. Past deficiencies and political constraints within the Lake/Sonoma/Mendocino WMA predicated that the County of Lake form its own WMA. The Lake County Weed Management Plan was developed in September 2001 for contracting with the California Department of Food and Agriculture to implement a collaborative integrated weed management work plan for the control of noxious and invasive weeds under SB1740 WMA support program. An agreement for \$47,932 is pending for the inventory, eradication and mapping of *Arundo* and *Tamarix* and other noxious and invasive weed species

To date 100 confirmed locations of *Arundo donax* have been input into the Districts GIS database. The locational accuracy of observations ranges from windshield observations, land owner reports, GPS coordinates and field mapping. Of those 100 sites 20 have been undergoing eradication efforts over the past three years with Flood Control Zone funding. Due to budget constraints no site information or monitoring protocols have been established or followed. Thirty eight (38) sites are scheduled to be eradicated as part of this proposal. The remaining sites will have site information collected on them as part of a larger inventory effort for future eradication budgeting.

Eradication efforts have been performed by the District through the use of a licensed contractor utilizing the cut, resprout and spray method under a three-year program. These treatments have been limited to those areas that are under flood zone jurisdiction. The exact degree of success is uncertain for there are no provisions for a monitoring

protocol at this time except for incidental checkups when staff are in the area. These incidental checkups do look promising on clumps that are in their third year of follow up respray treatments.

The East Lake and West Lake Resource Conservation Districts (RCD) have also started working on the inventory and eradication of *Arundo donax* within Lake County by working with local watershed Coordinated Resource Management and Planning Groups (CRMP). The Middle Creek CRMP has done field surveys to map locations of *Arundo* in the Middle Creek Watershed. The Scotts Creek CRMP has treated two clumps by two methods to compare results. One method was the cut, resprout and spray method. The other was the cut and tarp method. The Upper Putah Creek Stewardship has applied for a 319h grant to inventory, eradicate and educate the public on invasive species, primarily *Arundo donax*.

The District and the RCD being new to an *Arundo* eradication program have learned that public outreach and education is an essential component towards successful results. There was a large patch of *Arundo* that was eradicated by the cut, resprout and spray method adjacent to Adobe Creek. As soon as the stand was cut down the landowner went in and disked the area for a small vineyard project. Clearly, awareness of the problem could have prevented this rhizome disturbance and downstream distribution. "Wanted dead" flyers for *Arundo donax* posted in the County Courthouse have generated positive results on obtaining new location information and informing the public on what they can do to help eliminate this unwanted plant species.

Geographic Scope

The results of this project will be used countywide and shared with other interested individuals. **For purposes of this grant proposal, only the Upper Cache Creek and Upper Putah Creek watersheds that are headwaters to the Bay-Delta are to be considered for eradication and monitoring efforts.** Other areas within Lake County that drain to the Eel and Russian River watersheds will be covered under separate funding sources for aggressively pursuing the eradication of *Arundo donax* and *Tamarix spp.*

Project Partners and Community Involvement

A key component to this proposed project is the coordination of efforts with the Lake County Agriculture Department, RCD, Natural Resources Conservation Service, local Tribal governments, the many Lake County CRMP groups and other interested individuals and/or groups to inventory the distribution of *Arundo donax* and begin eradication efforts.

The RCD has also started working on the inventory and eradication of *Arundo donax* within Lake County. The RCD has worked closely with the Natural Resources Conservation Service (NRCS), The Water Resources Division of Public Works, local Tribal governments and the many Lake County Coordinated Resource Management and Planning Group's (CRMP) in the Middle/Clover Creek, Scotts Creek, Big Valley, Schindler Creek and Putah Creek watersheds to raise awareness and start volunteer

inventory and eradication efforts towards this unwanted plant specie. The RCD has also held a workshop on *Arundo donax* and gave an informative presentation to the Water and Land Subcommittee of the Lake County Resource Management Committee. The RCD will be a main project partner under this proposal.

Watershed Linkages

Watershed efforts will be strengthened through the coordination of efforts and funding support for the RCD. The RCD works closely with the District, Natural Resources Conservation Service, local Tribal governments and the many Lake County CRMP Groups.

Project efforts will be reviewed by the Lake County Coordinating Resource Management Committee (RMC) or appropriate subcommittee. RMC objectives are a healthy watershed and sustainable development for the benefit of residents, businesses, visitors, and the vitality of the County through a coordinated, balanced, ecosystem approach. The RMC and its issue-based subcommittees draw people together from each of Lake County's watersheds. The RMC is also interacting with a downstream Cache Creek Stakeholders Group which considers watershed issues in the lower reaches of Cache Creek all the way to the Sacramento River.

Technology Transfer

All site information will be maintained in a data base and linked to a GIS system to determine the extent of infestations and monitor success. Efforts will be coordinated with Team Arundo del Norte (TadN) so as to help ensure that collected information is compatible with existing database structures and will also be kept abreast of all project efforts and findings. Furthermore, this project will be posted on the Lake County Watershed Awareness Web Site and the Natural Resource Projects Inventory (NRPI) electronic database which provides information about *Arundo* projects with contacts for networking and sharing information.

Tracking of success toward meeting project outcomes

The success of eradication efforts will be determined by the results of follow up monitoring utilizing methodologies adopted by TAdN. The success of the public education and outreach component will be measured by the amount of printed literature taken by the public, amount of more in depth inquiries by the public and by attendance of local meetings and forums on invasive plant species.

Permitting

The RCD has received full support from the California Dept. of Fish and Game for the eradication of *Arundo donax* within the riparian zone (see Exhibit A). Even though the RCD is working in conjunction with the District, the District is making efforts to obtain a 1601 waiver, referencing the District, for the eradication of invasive species within the riparian zone.

An NPDES permit is not required if pesticides are sprayed and/or applied above the water line (see Exhibit B).

Property Access

Rights of entry have not been obtained at this time. The District, which encompasses all of Lake County, has the right to access property in order to accomplish its goals. Regardless, property owners will be notified and rights of entry obtained before any inventory and eradication efforts are begun. Responses from the Arundo “Wanted dead” flyers posted in the County Courthouse has resulted in many positive responses for landowners wanting to eradicate Arundo donax.

Goals and Objectives as They Relate to the CALFED Watershed Program

The proposed project meets the Watershed Program Plan five primary elements in the following manner.

Element A – Coordination and Assistance

A key component to this proposed project is the continued coordination of efforts with the Lake County Agriculture Department, West Lake Resource Conservation District, Natural Resources Conservation Service, local Tribal governments, the many Lake County CRMP groups and other interested individuals to inventory and eradicate invasive species.

Element B – Adaptive Management and Monitoring

Team Arundo delNorte surveying and monitoring protocols (EXHIBITS C–F) will be used for the collection of site information and monitoring of success of eradication efforts. The collection of site information and monitoring of eradication efforts will allow for the comparison of treatment methods in differing environmental settings, allow for the re-inventory of problem areas to determine success of treatments and/or lack of success for reevaluation of treatment methods. The collection of site information for future eradication efforts and monitoring information from current eradication efforts will allow for more informed future management decisions.

Riparian revegetation is a common concern among the environmental and regulation community and is beyond the time frame of this grant. Revegetation should proceed as soon as eradication of the invasive specie is complete, this may take anywhere from three to five years depending on the size of clump and success of eradication efforts. As part of the monitoring of eradication efforts, the success of natural plant succession will be monitored through a combination of photo documentation and habitat surveys. Arundo is present in many differing environmental settings ranging from gravel bars normally devoid of any other vegetation to dense riparian areas. It is anticipated that through habitat survey forms and photo documentation the success of natural succession in differing environmental settings may be evaluated for making better informed decisions on where to implement revegetation activities more cost effectively. The results of these surveys will be incorporated within a revegetation plan as part of this proposal.

Element C – Education and Outreach

The Lake County Flood Control and Water Conservation District being new to an Arundo eradication program has learned that public outreach and education is an essential component towards successful results. In one instance there was a large patch of

Arundo that was eradicated by the cut, resprout and spray method adjacent to Adobe Creek by a hired contractor. As soon as the stand was cut down the landowner went in and disked the area for a small vineyard project. Clearly, awareness of the problem could have prevented this rhizome disturbance and downstream distribution. "Wanted dead" handouts posted in the County courthouse have generated many public questions and concerns on Arundo. Upon consulting with the public, location information is input into the GIS as an initial inventory to map coverage and aid in future eradication efforts. The land owner is then told about the problem and what they can do. Due to funding constraints the only printed information available to the public at this time is the Arundo donax Fact Sheet available from the Team Arundo delNorte web site.

GIS database management will be coordinated with Team Arundo delNorte to ensure that data may be incorporated into a centralized database.

Element D – Integration With Other CALFED Programs

The proposed project meets the goals of the CALFED Bay-Delta Ecosystem Restoration Program by specifically addressing Strategic Goal Number 5: Non-native Invasive Species- through the collection of site information prior to eradication efforts, eradication and monitoring of eradication efforts. The project also supports Strategic Goal Number 4: Habitats- by the above mentioned actions and through more detailed monitoring efforts aimed at determining the success of natural plant succession towards an "optimal" riparian habitat in differing environmental settings.

Element E – Watershed Processes and Relationships

This element is covered by the integration with Strategic goal Number 4: Habitats of the Ecosystem Restoration Program through monitoring actions aimed at determining the success of natural plant succession as a result of removing invasive species. The development of an invasive weed management plan covering both aquatic and terrestrial species tailored for Lake County and thus the California Coast Range will also help to meet the goals of CALFED.

PART C – PROPOSED SCOPE OF WORK (B & C not to exceed 15 pages)

1. BACKGROUND AND GOALS

Two invasive species *Arundo donax* and *Tamarix spp.* are impacting California's waterways by displacing native riparian vegetation, providing poor habitat for terrestrial insects and wildlife and by reducing water availability for native vegetation. These two species have been nominated as among 100 of the "World's Worst" invaders (Global Invasive Species Database - www.issg.org). In recognition of the widespread distribution and invasive nature of *Arundo donax* and *Tamarix spp.* the implementation of actions to prevent, control and reduce impacts of these non-native invasive species is a strategic goal of the CALFED Bay-Delta Program.

The purpose of this proposal is to inventory, eradicate, monitor eradication efforts, determine the success of natural plant succession following eradication and educate the public on two invasive riparian species of concern, primarily *Arundo donax* and *Tamarix spp.*. The primary objective is the inventory and eradication of *Arundo donax*. *Tamarix spp.*, which occurs in the same environmental setting as *Arundo*, will be inventoried for future eradication efforts. The anticipated outcome is control of riparian invasive species, restoration of riparian habitat and increased public awareness about invasive species and how they alter riparian function.

The West Lake Resource Conservation District is a primary partner in this proposal due to their expertise and ability to work across administrative boundaries for a common watershed effort.

2. PROPOSED WORK TO BE PERFORMED (Start with Task 4.)

PROGRAM TASKS

TASK 4	Inventory of <i>Arundo donax</i> and <i>Tamarix spp.</i>
TASK 5	Eradication of <i>Arundo donax</i>
TASK 6	Monitoring of Eradication Efforts
TASK 7	Revegetation Plan
TASK 8	Public Outreach and Education
TASK 9	Invasive Species Management Plan
TASK 10	Draft and Final Reports

TASK 4 Inventory of *Arundo donax* and *Tamarix spp.*

There are three components to this task. First, is the collection of site information of known colonies of *Arundo donax* before eradication. Second is the collection of site information for known areas of infestation to develop a budget for future scheduling of eradication efforts. Thirdly, *Tamarix spp.* site information will be collected concurrently with the collection of site information for *Arundo donax* and input into the GIS for future eradication of this invasive specie. Information will be collected by utilizing the TadN Field Workday Metadata, Site Description and *Arundo* Observation forms (EXHIBITS C,D & F). All locations will be GPS'd and maintained within the County's GIS data base.

TASK 4.1 Middle Creek Watershed

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The Middle Creek CRMP has performed an inventory of *Arundo donax* on Middle Creek, Clover Creek and Alley Creek. Existing inventory information is limited to location only, site information as per the TadN survey protocols will be gathered by the CRMP before eradication efforts. Other sites along Middle Creek have been mapped by stream restoration crews while performing stream restoration projects for the county. This is very rough locational information, the TadN survey protocols will be followed for these areas before eradication efforts.

TASK 4.2 Highway 20 Corridor- Tributaries to Upper Cache Creek

Both *Arundo donax* and *Tamarix spp.* are abundant along the Highway 20 corridor along the North Fork Cache Creek and other tributaries to Cache Creek along Highway 20. No activities have begun on these sites. Site information needs to be collected before an eradication budget can be formulated.

TASK 4.3 Upper Putah Creek Watershed – St. Helena Creek & Dry Creek

Both *Arundo donax* and *Tamarix spp.* are abundant in St. Helena Creek and Dry Creek within the Middletown area. No activities have begun on these sites. Site information needs to be collected before an eradication budget can be formulated. The Upper Putah Creek Stewardship has recieved a 319(h) grant , a portion of the requested funds were for *Arundo donax* inventory, eradication and public outreach efforts in the Putah Creek Watershed (see EXHIBIT G).

TASK 4.4 Clear Lake Shoreline

Arundo is sporadically distributed along the shores of Clear Lake. The RCD has done formal surveys utilizing a modified Tadn survey form(s) along the north shore. Site information needs to be collected for other areas along the lake shoreline before an eradication budget can be formulated.

TASK 4.5 Kelsey Creek

Site information will be collected on known sites of *Arundo* on Kelsey Creek before eradication. Site information will also be collected as part of a larger inventory effort above and below these known areas of infestation.

TASK 4.6 Adobe Creek

Site information will be collected on known sites of *Arundo* on Adobe Creek before eradication. Site information will also be collected as part of a larger inventory effort above and below these known areas of infestation.

TASK 4.7 Scotts Creek

Site information has been collected on known sites of *Arundo* on Scotts Creek by the Scotts Creek CRMP. Site information will also be collected as part of a larger inventory effort above and below these known areas of infestation.

TASK 5 Eradication of *Arundo donax* at known locations

Eradication of *Arundo donax* will be through the use of volunteer labor by the various Lake County CRMP groups and a licensed contractor. Different eradication methods

including but not limited to the cut resprout and spray, cut and tarp, cut stump and direct applications of STALKER may be used. Current eradication budgets have been determined on the bid price for number of clumps in a specific area for the cut sprout and respray method with Rodeo and/or Round-Up Pro from past eradication efforts within Flood Control Zones 1 and 5. Site information collected in areas of known infestations will be used to develop more detailed budgets for future eradication efforts.

Areas designated for eradication are dispersed throughout Lake County. Areas infested with *Arundo donax* are generally located along low gradient streams with gravel and/or silt substrates. Clumps scheduled for eradication have historically been located by “windshield” observations so access is good. The exact acreage of *Arundo* is unknown and current information is limited to location. Eradication budgets have been estimated from past eradication efforts by assuming that the distribution characteristics of *Arundo* are similar and that costs will average out for the number of clumps in a specific area.

TASK 5.1 Middle Creek Watershed

Eradication efforts have begun within Flood Control Zone 8 of the Middle Creek Watershed within the Middle Creek Flood Control Project Levees. Approximately 70% of inventoried *Arundo* has been undergoing the cut sprout and respray treatment program and are still undergoing follow-up treatments through Flood Control Zone 8 budget. Eradication of *Arundo donax* will occur through the use of a licensed contractor and volunteer efforts by the Middle Creek CRMP. The CRMP is waiting funding to begin eradication efforts along these creeks and adjacent areas.

TASK 5.2 Kelsey Creek Watershed

Several sites within the Kelsey Creek Flood Control Zone 5 have been identified and sent out to bid for eradication. Eradication cost exceeded the allowable budget so there has been no activity to date on these 3 sites. Further sites have been located and input into the GIS for future efforts. Eradication of *Arundo donax* will occur through the use of a licensed contractor and/or volunteer efforts.

TASK 5.3 Adobe Creek Watershed

Eradication efforts have begun in Flood Control Zone 1 within the Adobe Creek Watershed. Two sites identified three years ago are undergoing the cut, resprout and respray treatment program towards eradication. Several other patches of *Arundo* have been observed and input into the GIS. Eradication of *Arundo donax* will occur through the use of a licensed contractor and volunteer efforts utilizing the cut, sprout and respray and cut and tarp methods.

TASK 5.4 Scotts Creek Watershed

The RCD, in close coordination with the Scotts Creek CRMP has initiated eradication efforts on two known clumps of *Arundo donax*. One clump was treated by the cut and tarp method the other by the cut and spray method. Both sites are in close proximity to each other and should yield valuable information on different treatment methodologies and success of treatments by type. Eradication for these two patches are through volunteer efforts.

TASK 5.5 North Shore of Clear Lake

The RCD, in conjunction with the Natural Resources Conservation Service, has surveyed locations of *Arundo donax* along the north shore of Clear Lake. Survey information included GPS location, pictures and modified survey forms from TadN. The information gathered has been very informative for both learning inventory procedures and in heightening public awareness of the problem. Eradication of *Arundo donax* will occur through the use of a licensed contractor and volunteer efforts by the appropriate CRMP groups.

TASK 6 Monitoring

Monitoring is a key component of an effective eradication program. The monitoring of eradication efforts will allow for the comparison of treatment methods in differing environmental settings and allow for the re-inventory of problem areas to determine success or lack of success of treatments. Site information and monitoring information may then further be used to do a cost based evaluation of treatment methods among differing environmental settings. Monitoring information will be collected by utilizing the TadN Field Workday Metadata and Arundo Treatment Log forms (see EXHIBITS E & F).

TASK 7 Revegetation Plan

Areas targeted for eradication are generally small and range in site character from densely vegetated with plenty of riparian species available for natural revegetation to gravel bars with minimal vegetation to naturally reoccupy the site. Through documentation of the general site character utilizing the TAdN field survey forms across varying environmental settings, species documentation and photo monitoring a more realistic determination of where to focus revegetation efforts for all types of future projects may be ascertained. The results of surveys with an added emphasis on determining the extent of natural plant succession will be used to help formulate a revegetation plan.

TASK 8 Public Outreach and Education

Through education and outreach activities the general public at large will be made more aware of the problems that *Arundo donax* and *Tamarix spp.* pose to the environment and what they may do to stop the spread of invasive species in general. Education and outreach will be accomplished through the distribution of information on invasive plants, public forums and coordination of efforts between interested stakeholders.

TASK 9 Invasive Species Management Plan

A consultant will be hired to prepare an Invasive Weed Management Plan specific to the regional characteristics of Lake County and the California Coast Range. The plan will identify key species of concern and recommend appropriate eradication or control strategies utilizing an Integrated Pest Management approach. The Weed Management Area will be utilized to prioritize actions and prevent the further spread of nonnative invasive species into sensitive areas.

TASK 10 Draft and Final Reports

Copies of the final report and Management Plan will be made available to the Contract Manager and Team Arundo delNorte. These documents will also be made available on

line through the Natural Resources Projects Inventory Database and the Lake County Watershed Awareness Web Site.

3. TARGET COMPLETION DATES

Task No. Deliverables	Target Completion Dates (in months from final contract approval assume July 2003)
Task 1: Project Administration	
1.2 Quarterly/Monthly Progress Reports (<i>note: must be submitted 10th of the month</i>)	4, 8, 12, 16, 20, 24, 28, 32, 36
1.5 Contract Summary Form (<i>note: must be completed within 3 months of contract execution</i>)	3
1.6 List of subcontracted tasks, Good Faith Effort documents, quarterly/monthly Utilization Reports	3
1.7 Subcontractor Documentation	3
1.8 Expenditure/Invoice Projections	3
1.9 Project Survey Form (<i>note: must be completed prior to final payment and at the end of the project</i>)	34
Task 2: CEQA/NEPA Documents and Permits, if applicable (<i>Whether or not project is funded by Proposition 13, project must comply with CEQA</i>)	3
2.1 CEQA/NEPA Documentation	3
2.2 Permits	3
Task 3: Quality Assurance Project Plan, if applicable (<i>SAP/QAPP</i>)	4
	30
Task 4: Inventory	
Task 5: Eradication	30
Task 6: Monitoring	30
Task 7: Revegetation Evaluation	30
Task 8: Public Education and Outreach	30 – an ongoing effort
Task 9: Management Plan	30
Task 10: Draft and Final Reports	
#.1 Draft Report	32
#.2 Final Report (<i>note: must be completed no later than one month before end of contract</i>)	34

PART D1 - BUDGET SUMMARY SHEET – TASK BUDGET BREAKDOWN
(Parts D1 and D2 combined not to exceed 2 pages)

	Proposition 13 Funds	Other Project Funds	Total Budget
1. Task 1 – Project Administration	<u>\$3,832</u>	<u>\$</u>	<u>\$3,832</u>
2. Task 2 – CEQA/NEPA Documents and Permits	<u>\$50</u>	<u></u>	<u>\$50</u>
3. Task 3 – Quality Assurance Project Plan	<u>\$1,187</u>	<u></u>	<u>\$1,187</u>
4. Task 4 – Inventory	<u>\$35,210</u>	<u>\$3,725</u>	<u>\$38,935</u>
5. Task 5 – Eradication	<u>\$35,475</u>	<u>\$1,067</u>	<u>\$36,542</u>
6. Task 6 – Monitoring	<u>\$17,021</u>	<u></u>	<u>\$17,021</u>
7. Task 7– Revegetation Plan	<u>\$16,821</u>	<u></u>	<u>\$16,821</u>
8. Task 8 – Public Outreach and Education	<u>\$7,989</u>	<u>\$3,706</u>	<u>\$11,749</u>
9. Task 9 – Management Plan	<u>\$61,897</u>	<u></u>	<u>\$61,897</u>
10. Task 10 – Draft and Final Plan	<u>\$1,780</u>	<u></u>	<u>\$1,780</u>
TOTAL BUDGET	<u>\$181,262</u>	<u>\$8,552</u>	<u>\$189,814</u>

PART D2 - BUDGET SUMMARY SHEET – LINE ITEM

Budget (Parts D1 and D2 combined not to exceed 2 pages)

	Proposition 13 Funds	Other Project Funds	Total Budget
1. Personnel Services	\$54,115	\$2,167	\$56,282
2. Operating Expenses	\$3,777	\$2,400	\$6,177
3. Property Acquisitions			
a. Equipment		\$2,000	\$2,000
b. Furniture			
c. Portable assets			
d. Electronic data software/hardware	\$1,284		\$1,284
e. Processing equipment			
f. Miscellaneous			
4. Professional and Consultant Services	\$113,210	\$1,000	\$114,210
5. Contract Laboratory Services			
6. Construction Expenses	\$8,876	\$985	\$9,861
7. General Overhead			
8. TOTAL BUDGET	\$181,262	\$8,552	\$189,814

9. Describe the source and nature of the matching funds.

California Department of Food and Agriculture

\$47,932 has been allocated for the inventory, eradication and mapping of *Arundo* and *Tamarix* and other noxious and invasive weed species. Only \$4,792 qualifies as a matching fund towards this project.

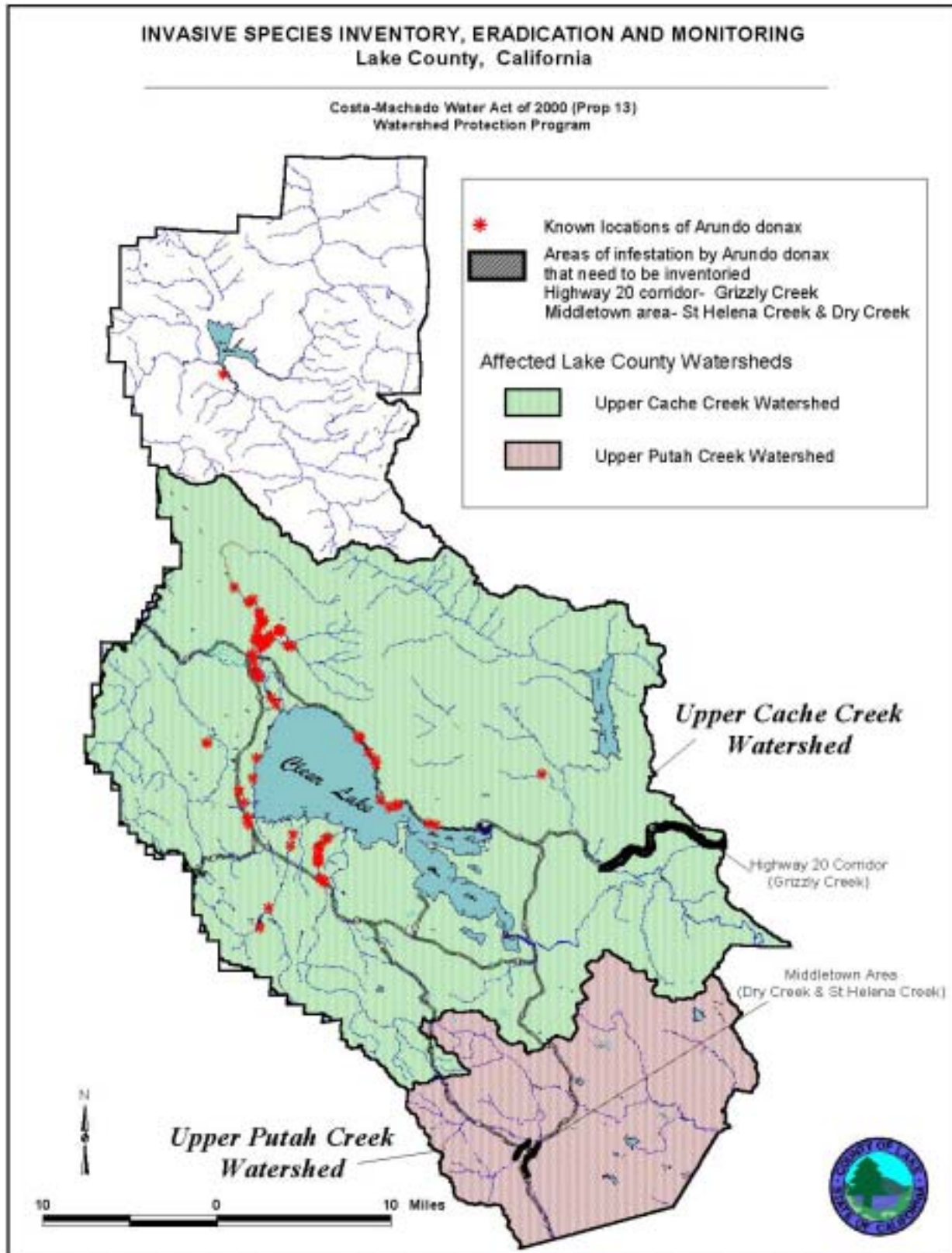
Center for Invasive Plant Management

\$5,000 has been allocated for education and outreach efforts. Only \$3,760 qualifies as a matching fund towards this project.

Upper Putah Creek Stewardship 319(h) Grant

The Upper Putah Creek Stewardship has recieved a 319(h) grant , a portion of the requested funds are for *Arundo donax* inventory, eradication and public outreach efforts in the Putah Creek Watershed (see EXHIBIT G).

PART E – PROJECT MAP



PART F – ENVIRONMENTAL INFORMATION FORM (3 pages maximum)

ENVIRONMENTAL INFORMATION FORM

NEPA/CEQA

1. Will this project require compliance with CEQA, NEPA, or both? Yes **X** No _____
2. If you checked “no” to question 1, please explain why compliance is not required for the actions in this proposal.
3. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

CEQA Lead Agency	Lake County Flood Control and Water Conservation District
NEPA Lead Agency	_____

4. Please check which type of document will be prepared.

CEQA		NEPA	
Categorical Exemption	<u>X</u>	Categorical Exclusion	_____
Initial Study	_____	Environmental Assessment/FONSI	_____
Environmental Impact Report	_____	Environment Impact Statement	_____

If you anticipate relying on either or both the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that covers this project. (Example: Fish and Wildlife Service Manual at 516 DM 6 Appendix 1.4 Categorical Exclusions Section B Resources Management: (1) Research, inventory, and information collection activities directly related to the conservation of fish and wildlife resources.)

Categorically Exempt, 15308: Actions by Regulatory Agencies for the Protection of the Environment.

5. If the CEQA/NEPA process is not complete, please describe the estimated timelines and cost for the process and the expected date of completion.

The Lake County Community Development Department charges \$50 dollars and may take up to one month to secure. CEQA documentation will be secured before any eradication activities are performed.

6. If the CEQA/NEPA document has been completed:

What is the name of the document? _____
Please attach a copy of the CEQA/NEPA document cover page to the application.

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please check all that apply.

LOCAL PERMITS AND APPROVALS	Needed?	Obtained?
Conditional use permit		
Variance		
Subdivision Map Act		
Grading permit		
General plan or Local Coastal Program amendment		
Specific plan approval		
Rezone		
Williamson Act Contract cancellation		
Local Coastal Development Permit		
Other CEQA Cat. Ex. 15308: Actions by regulatory Agencies for Protection of the Environment.		
STATE PERMITS AND APPROVALS	Needed?	Obtained?
Scientific collecting permit		
CESA compliance: 2081		
CESA compliance: NCCP		
1601/03 The Lake County RCD has a 1603 waiver from Fish and Game. The LCFCWCD is awaiting a response to be included in this waiver.	X	X
CWA 401 certification		
Coastal development permit		
Reclamation Board approval		
Notification of DPC or BCDC		
Other		
FEDERAL PERMITS AND APPROVALS	Needed?	Obtained?
ESA compliance Section 7 consultation		
ESA compliance Section 10 permit		
Rivers and Harbors Act		
CWA 404		

Other		
PERMISSION TO ACCESS PROPERTY		
Permission to access city, county or other local agency land. If “yes,” indicate the name of the agency: _____	X	
Permission to access State land. If “yes,” indicate the name of the agency: _____	X	
Permission to access federal land. If “yes,” indicate the name of the agency: _____	X	
Permission to access private land. If “yes,” indicate the name of the landowner (if multiple landowners, indicate how many individuals will be involved and what percentage have already granted permission: _____	X	

PART G – LAND USE QUESTIONNAIRE (2 pages maximum)

PART - LAND USE QUESTIONNAIRE

1. Do the actions in the proposal involve construction or physical changes in the land use?
Yes____ No **X**

If you answered “yes” to # 1, describe what actions will occur on the land involved in the proposal.

If you answered “no” to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only). **Inventory, eradication and monitoring of Invasive plant species.**

2. How many acres of land will be subject to a land use change under the proposal? 0
3. What is the current land use of the area subject to a land use change under the proposal? What is the current zoning and general plan designation(s) for the property? Does the current land use involve agricultural production?
No land use changes are proposed.
a) Current land use **Agricultural, Residential, Industrial, Open Space**
b) Current zoning **RR, APZ, A, O, R1, R3, SR, C3, CR, C1, CH**
c) Current general plan designation **I-Ag, RR, SR, RL, RC, A, HDR, SRe, PL, Cs, UR, Cr**
d) Does current use involve agricultural production? Yes **X** No

ZONING DESIGNATIONS

A- Agricultural District
APZ- Agricultural Preserve District
O- Open Space District
RR- Rural Residential District
R1- Single Family Residential District
R3- Multi Family Residential District
SR- Suburban Residential District
CR- Resort Commercial District
CH- Highway Commercial District
C1- Local Commercial District
C3- Service Commercial District

GENERAL PLAN DESIGNATIONS

A- Agriculture
Cr- Resort Commercial
Cs- Service Commercial
HDR- High Density Residential
I-AG- Intensive Agriculture
PL- Public Lands
RC- Resource Conservation
RL- Rural Lands
RR- Rural Residential
SR- Suburban Residential
Sre- Suburban Residential Reserve
UR- Urban

4. Is the land subject to a land use change in the proposal currently under a Williamson Act contract?
Yes____ No **X** **No land use changes are proposed.**
5. What is the proposed land use of the area subject to a land use change under the proposal?
No land use changes are proposed.
6. Will the applicant acquire any land under the proposal, either in fee (purchase) or through a conservation easement? Yes____ No **X**

- a) If you answered "yes" to 6, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement: _____
- b) Total number of acres to be acquired under proposal _____
- c) Number of acres to be acquired in fee _____
- d) Number of acres to be subject to conservation easement _____
7. For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.
No land use changes are proposed.
8. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal? Yes **X** No _____
9. For land acquisitions (fee title or easements), will existing water rights be acquired? Yes _____ No **X**
10. Does the applicant propose any modifications to the water right or change in the delivery of the water?
Yes _____ No **X**

If "yes" to 10, please describe the modifications or changes.

PART H – SUPPORTING DOCUMENTATION (10 pages maximum)

EXHIBIT A

Letter of Support from Fish and Game to the RCD

EXHIBIT B

Reproduced copy of email correspondence regarding NPDES permitting

EXHIBIT C

Team Arundo delNorte- Arundo Observation data sheet

EXHIBIT D

Team Arundo delNorte- Site Description data sheet

EXHIBIT E

Team Arundo delNorte- Arundo Treatment Log data sheet

EXHIBIT F

Team Arundo delNorte- Field Workday Metadata data sheet

EXHIBIT G

Upper Putah Creek Stewardship 319h Scope of Work